

WHAT IS CLAIMED IS:

- 1 1. An electrode comprising:
2 a conductive adhesive layer; and
3 a conductive layer coupled to the conductive adhesive layer, the conductive
4 layer having at least one nonconductive region therein.
- 1 2. The electrode of claim 1,
2 wherein a nonconductive region affects electrical current transport properties
3 associated with the electrode.
- 1 3. The electrode of claim 1,
2 wherein the conductive adhesive layer may be characterized by a thickness,
3 and wherein a nonconductive region affects electrical current transport properties in a
4 direction perpendicular to the conductive adhesive layer's thickness.
- 1 4. The electrode of claim 1, wherein the nonconductive region comprises a void
2 in the conductive layer.
- 1 5. The electrode of claim 1,
2 wherein the electrode comprises an electrotherapy electrode.
- 1 6. The electrode of claim 1,
2 wherein the electrode comprises a defibrillation electrode.
- 1 7. An electrode comprising:
2 a conductive adhesive layer; and
3 a conductive layer coupled to the conductive adhesive layer, the conductive
4 layer having at least one void therein that provides a nonconductive region within the
5 conductive layer.
- 1 8. The electrode of claim 7,
2 wherein a void affects electrical current transport properties associated with
3 the electrode.
- 1 9. The electrode of claim 7,
2 wherein the conductive adhesive layer may be characterized by a thickness,
3 and wherein a void affects electrical current transport properties in a direction
4 perpendicular to the conductive adhesive layer's thickness.

- 1 10. The electrode of claim 7,
2 wherein the electrode comprises an electrotherapy electrode.
- 1 11. The electrode of claim 7,
2 wherein the electrode comprises a defibrillation electrode.
- 1 12. An electrode comprising:
2 a conductive adhesive layer;
3 a conductive layer coupled to the conductive adhesive layer; and
4 a set of swatches positioned between the conductive adhesive layer and the
5 conductive layer,
6 wherein a swatch is characterized by an area that is smaller than that of the
7 conductive layer.
- 1 13. The electrode of claim 12, wherein a swatch comprises an insulating material.
- 1 14. The electrode of claim 12, wherein a swatch affects electrical current transport
2 properties associated with the electrode.
- 1 15. The electrode of claim 12, wherein the conductive adhesive layer may be
2 characterized by a thickness, and wherein a swatch affects electrical current
3 transport properties in a direction perpendicular to the conductive adhesive layer's
4 thickness.
- 1 16. The electrode of claim 12,
2 wherein the electrode comprises an electrotherapy electrode.
- 1 17. The electrode of claim 12,
2 wherein the electrode comprises a defibrillation electrode.
- 1 18. An electrode comprising an ultrasonic transmitter.
- 1 19. The electrode of claim 18,
2 wherein the electrode comprises an electrotherapy electrode.
- 1 20. The electrode of claim 18,
2 wherein the electrode comprises a defibrillation electrode.
- 1 21. An electrode comprising an ultrasonic receiver.

- 1 22. The electrode of claim 21,
2 wherein the electrode comprises an electrotherapy electrode.
- 1 23. The electrode of claim 21,
2 wherein the electrode comprises a defibrillation electrode.
- 1 24. A system comprising:
2 a device comprising an electrical measurement element; and
3 an electrode comprising:
4 a conductive adhesive layer; and
5 a conductive layer coupled to the conductive adhesive layer, the
6 conductive layer having at least one nonconductive region therein.
- 1 25. The system of claim 24,
2 wherein a nonconductive region affects electrical current transport properties
3 associated with the electrode.
- 1 26. The system of claim 24,
2 wherein the conductive adhesive layer may be characterized by a thickness,
3 and wherein a nonconductive region affects electrical current transport properties in a
4 direction perpendicular to the conductive adhesive layer's thickness.
- 1 27. The system of claim 24, wherein the nonconductive region comprises a void in
2 the conductive layer.
- 1 28. The system of claim 24,
2 wherein the electrode comprises an electrotherapy electrode.
- 1 29. The system of claim 25,
2 wherein the device comprises a defibrillator and the electrode comprises a
3 defibrillation electrode.
- 1 30. An system comprising:
2 a device comprising an electrical measurement element; and
3 an electrode comprising:
4 a conductive adhesive layer; and

5 a conductive layer coupled to the conductive adhesive layer, the
6 conductive layer having at least one void therein that provides a
7 nonconductive region within the conductive layer.

1 31. The system of claim 30,
2 wherein a void affects electrical current transport properties associated with
3 the electrode.

1 32. The system of claim 30,
2 wherein the conductive adhesive layer may be characterized by a thickness,
3 and wherein a void affects electrical current transport properties in a direction
4 perpendicular to the conductive adhesive layer's thickness.

1 33. The system of claim 30,
2 wherein the electrode comprises an electrotherapy electrode.

1 34. The system of claim 30,
2 wherein the device comprises a defibrillator and the electrode comprises a
3 defibrillation electrode.

1 35. A system comprising:
2 a device comprising an electrical measurement element; and
3 an electrode comprising:
4 a conductive adhesive layer;
5 a conductive layer coupled to the conductive adhesive layer; and
6 a set of swatches positioned between the conductive adhesive layer
7 and the conductive layer,
8 wherein a swatch is characterized by an area that is smaller than that of
9 the conductive layer.

1 36. The system of claim 35, wherein a swatch comprises an insulating material.

1 37. The system of claim 35, wherein a swatch affects electrical current transport
2 properties associated with the electrode.

1 38. The system of claim 35, wherein the conductive adhesive layer may be
2 characterized by a thickness, and wherein a swatch affects electrical current

3 transport properties in a direction perpendicular to the conductive adhesive layer's
4 thickness.

1 39. The system of claim 35,
2 wherein the electrode comprises an electrotherapy electrode.

1 40. The system of claim 35,
2 wherein the device comprises a defibrillator and the electrode comprises a
3 defibrillation electrode.

1 41. A system comprising:
2 a device comprising an electrical measurement element; and
3 an electrode comprising an ultrasonic transmitter.

1 42. The system of claim 41,
2 wherein the electrode comprises an electrotherapy electrode.

1 43. The system of claim 41,
2 wherein the device comprises a defibrillator and the electrode comprises a
3 defibrillation electrode.

1 44. A system comprising:
2 a device comprising an electrical measurement element; and
3 an electrode comprising an ultrasonic receiver.

1 45. The system of claim 44,
2 wherein the electrode comprises an electrotherapy electrode.

1 46. The system of claim 44,
2 wherein the device comprises a defibrillator and the electrode comprises a
3 defibrillation electrode.

1 47. A release liner comprising:
2 a release layer; and
3 one from the group of a moisture permeable membrane and a moisture
4 absorbent membrane.

1 48. The release liner of claim 47,
2 wherein the membrane comprises paper.

- 1 49. The release liner of claim 47,
2 wherein the membrane is maintained in a position via attachment to the
3 release layer.
- 1 50. The release liner of claim 47,
2 wherein the release layer comprises a foldable sheet.
- 1 51. The release liner of claim 47,
2 wherein a portion of the membrane extends beyond a boundary of the release
3 layer.
- 1 52. A release liner comprising:
2 a first release layer;
3 one from the group of a moisture permeable membrane and a moisture
4 absorbent membrane; and
5 a second release layer.
- 1 53. The release liner of claim 52,
2 wherein the membrane comprises paper.
- 1 54. The release liner of claim 52,
2 wherein the first release layer includes an opening therein, and wherein the
3 second release layer includes an opening therein.
- 1 55. The release layer of claim 52,
2 wherein a portion of the membrane extends beyond a boundary of the first
3 release layer.
- 1 56. A release liner comprising:
2 a release layer having an electrode mounting side and a rear side; and
3 a conductive strip upon the electrode mounting side,
4 wherein the conductive strip is maintained in a position parallel to the
5 electrode mounting side.
- 1 57. The release liner of claim 56,
2 wherein the release layer comprises a foldable sheet.

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- 1 58. A release liner comprising:
2 a release layer having a first side and a second side; and
3 a conductive band that encircles the first and second sides.
- 1 59. A release liner comprising:
2 a release layer having a first side and a second side;
3 a first conductive strip upon the first side; and
4 a second conductive strip upon the second side,
5 wherein the first conductive strip is maintained in a position parallel to the first
6 side.
- 1 60. A release liner comprising:
2 a single release layer having an electrode mounting side, a rear side, and a
3 set of openings; and
4 a conductive backing layer positioned upon a portion of the release liner's rear
5 side.
- 1 61. The release liner of claim 60,
2 wherein the set of openings includes a first opening and a second opening.
- 1 62. The release liner of claim 60,
2 wherein the single release layer comprises a foldable sheet.
- 1 63. The release liner of claim 60,
2 wherein the conductive backing layer comprises a metal.
- 1 64. The release liner of claim 60,
2 wherein the conductive backing layer comprises a conductive adhesive layer.
- 1 65. A release liner comprising:
2 a conductive backing layer;
3 a first release portion positioned upon a portion of the conductive backing
4 layer; and
5 a second release portion positioned upon a portion of the conductive backing
6 layer,
7 wherein the first and second release portions may be positioned in an
8 essentially identical plane.

- 1 66. The release liner of claim 65,
2 wherein the first release portion includes an opening.
- 1 67. A release liner comprising:
2 a first release layer having a first opening;
3 a second release layer having a second opening; and
4 a conductive adhesive layer between the first and second release layers.
- 1 68. The release liner of claim 67,
2 wherein the first opening is offset with respect to the second opening in
3 accordance with a separation distance.
- 1 69. The release liner of claim 67,
2 wherein the first opening is offset with respect to the second opening in
3 accordance with a separation distance that corresponds to a target impedance
4 range.
- 1 70. A release liner comprising:
2 a conductive adhesive layer; and
3 a foldable release layer folded to surround a portion of the conductive
4 adhesive layer.
- 1 71. The release liner of claim 70,
2 wherein the foldable release layer includes a first opening and a second
3 opening.
- 1 72. The release liner of claim 70,
2 wherein the foldable release layer includes a first opening and a second
3 opening, and wherein the first opening is offset with respect to the second opening in
4 accordance with a separation distance.
- 1 73. The release liner of claim 70,
2 wherein the foldable release layer includes a first opening and a second
3 opening, and wherein the first opening is offset with respect to the second opening in
4 accordance with a separation distance that corresponds to a target impedance
5 range.

- 1 74. A release liner comprising:
2 a release layer having an opening; and
3 an insulating swatch positioned over a portion of the opening.
- 1 75. A release liner comprising:
2 a release layer having a first and a second opening; and
3 an insulating swatch positioned over a portion of the first opening.
- 1 76. The release liner of claim 75, wherein the release layer comprises a foldable
2 sheet.
- 1 77. A release liner and electrode system comprising:
2 a release layer;
3 one from the group of a moisture permeable membrane and a moisture
4 absorbent membrane; and
5 a first electrode mounted upon the release layer.
- 1 78. The release liner and electrode system of claim 77,
2 wherein the membrane is maintained in a position via adhesion to a portion of
3 the first electrode.
- 1 79. The release liner and electrode system of claim 77,
2 wherein the release layer comprises a foldable sheet.
- 1 80. The release liner and electrode system of claim 77, further comprising:
2 a second electrode mounted upon the release layer,
3 wherein the first and second electrodes are in electrical contact.
- 1 81. A release liner and electrode system comprising:
2 a release layer having a first side and a second side;
3 one from the group of a moisture permeable membrane and a moisture
4 absorbent membrane;
5 a first electrode mounted upon the release layer's first side; and
6 a second electrode mounted upon the release layer's first side.
- 1 82. The release liner and electrode system of claim 81,
2 wherein the membrane contacts the release layer's second side.

- 1 83. The release liner and electrode system of claim 81,
2 wherein the first and second electrodes are in electrical contact.
- 1 84. A release liner and electrode system comprising:
2 a release layer having a first side and a second side;
3 a conductive strip upon the first side; and
4 a first electrode upon the first side,
5 wherein the conductive strip is maintained in a position parallel to the first side.
- 1 85. The release liner and electrode system of claim 84,
2 wherein the release layer comprises a foldable sheet.
- 1 86. The release liner and electrode system of claim 84, further comprising:
2 a second electrode upon the first side.
- 1 87. The release liner and electrode system of claim 84, further comprising:
2 a second electrode upon the first side,
3 wherein the first and second electrodes are in electrical contact.
- 1 88. The release liner and electrode system of claim 84, further comprising:
2 a second electrode upon the second side.
- 1 89. A release liner and electrode system comprising:
2 a release layer having a first side and a second side;
3 a conductive strip that encircles the first and second sides; and
4 a first electrode upon the first side.
- 1 90. A release liner and electrode system comprising:
2 a release layer having a first side and a second side;
3 a first conductive strip upon the first side;
4 a second conductive strip upon the second side; and
5 a first electrode upon the first side,
6 wherein the first conductive strip is maintained in a position parallel to the first
7 side.
- 1 91. A release liner and electrode system comprising:
2 a single release layer having an electrode mounting side, a rear side, a first
3 opening, and a second opening;

4 a conductive backing layer positioned upon a portion of the release liner's rear
5 side; and

6 a first electrode covering a portion of the first opening.

1 92. The release liner and electrode system of claim 91,
2 wherein the release layer comprises a foldable sheet.

1 93. The release liner and electrode system of claim 91,
2 wherein the conductive backing layer comprises a metal foil.

1 94. The release liner and electrode system of claim 91,
2 wherein the conductive backing layer comprises a conductive adhesive layer.

1 95. The release liner and electrode system of claim 91, further comprising:
2 a second electrode covering a portion of the second opening.

1 96. The release liner and electrode system of claim 91, further comprising:
2 a second electrode covering a portion of the second opening,
3 wherein the first and second electrodes are in electrical contact.

1 97. A release liner and electrode system comprising:
2 a conductive backing layer;
3 a first release portion positioned upon the conductive backing layer;
4 a second release portion positioned upon the conductive backing layer; and
5 a first electrode upon the first release portion,
6 wherein the first and second release portions may be maintained in an
7 essentially identical plane.

1 98. The release liner and electrode system of claim 97,
2 wherein the first release portion includes an opening.

1 99. A release liner and electrode system comprising:
2 a first release layer having a first opening therein;
3 a second release layer having a second opening therein;
4 a conductive adhesive layer between the first and second release layers;
5 a first electrode upon the first release layer; and
6 a second electrode upon the second release layer.

1 100. The release liner and electrode system of claim 99,
2 wherein the first opening is misaligned with respect to the second opening in
3 accordance with a separation distance.

1 101. The release liner and electrode system of claim 99,
2 wherein the first opening is misaligned with respect to the second opening in
3 accordance with a separation distance, and
4 wherein the first and second electrodes are in electrical contact.

1 102. A release liner and electrode system comprising:
2 a conductive adhesive layer;
3 a foldable release layer folded to surround a portion of the conductive
4 adhesive layer; and
5 a set of electrodes mounted upon the foldable release layer.

1 103. The release liner and electrode system of claim 102,
2 wherein the foldable release layer includes a first opening and a second
3 opening.

1 104. The release liner and electrode system of claim 102,
2 wherein the foldable release layer includes a first opening and a second
3 opening, and wherein the first opening is misaligned relative to the second opening in
4 accordance with a separation distance.

1 105. The release liner and electrode system of claim 102,
2 wherein a first electrode and a second electrode are in electrical contact.

1 106. A release liner and electrode system comprising:
2 a release layer having at least one opening;
3 an insulating swatch positioned over a portion of an opening; and
4 a set of electrodes upon the release layer.

1 107. The release liner and electrode system of claim 106, wherein a portion of at
2 least one electrode covers the swatch.

1 108. A release liner and electrode system comprising:
2 a release liner; and
3 an electrode comprising:

- 4 a conductive adhesive layer; and
5 a conductive layer coupled to the conductive adhesive layer, the
6 conductive layer including a nonconductive region therein.
- 1 109. The release liner and electrode system of claim 108,
2 wherein the release liner includes an opening therein.
- 1 110. The release liner and electrode system of claim 108,
2 wherein the nonconductive region is formed by a void in the conductive layer.
- 1 111. The release liner and electrode system of claim 108,
2 wherein the release liner includes an opening therein,
3 wherein the nonconductive region is formed by a void in the conductive layer,
4 and
5 wherein the void is centered over the release liner opening.
- 1 112. A release liner and electrode system comprising:
2 a release liner; and
3 an electrode comprising:
4 a conductive adhesive layer;
5 a conductive layer coupled to the conductive adhesive layer; and
6 an internal switch between the conductive adhesive layer and the
7 conductive layer,
8 wherein the internal switch is characterized by an area that is smaller than
9 that of the conductive layer.
- 1 113. The release liner and electrode system of claim 112,
2 wherein the release liner includes an opening therein.
- 1 114. The release liner and electrode system of claim 112,
2 wherein the release liner includes an opening therein, and
3 wherein the switch is centered over the release liner opening.
- 1 115. The release liner and electrode system of claim 112,
2 wherein an internal switch comprises an insulating material.
- 1 116. A release liner and electrode system comprising:
2 a release layer having an opening therein; and

an electrode comprising:
a conductive adhesive layer; and
a conductive layer coupled to the conductive adhesive layer, the
conductive layer having a recess therein,
wherein the recess is positioned over a portion of the release layer's opening.

117. A release liner and electrode system comprising:
a release liner; and
an electrode comprising an ultrasonic transmitter.

118. A release liner and electrode system comprising:
a release liner; and
an electrode comprising an ultrasonic receiver.

119. A release liner and electrode system comprising:
a release liner; and
at least one electrode mounted upon the release liner,
wherein an impedance associated with the electrode is greater than a typical
patient impedance range when the electrode exhibits acceptable operating
parameters.

120. The release liner and electrode system of claim 119,
wherein the electrode includes a conductive adhesive layer, and
wherein the impedance associated with the electrode remains above the
typical patient impedance range as the conductive adhesive layer loses moisture
over time.

121. A packaged electrode arrangement comprising:
a rigid container having an electrical interface incorporated therein;
a release liner having an opening therein; and
an electrode mounted upon the release liner.

122. A packaged electrode having an associated install by date that indicates a
date by which the electrode should be coupled to one from the group of a medical
device and a measuring device.

- 1 123. An electrode status indicator comprising:
2 a panel corresponding to a visual metaphor; and
3 an indicating element positioned relative to the panel.
- 1 124. The electrode status indicator of claim 123,
2 wherein the visual metaphor corresponds to a fuel gauge.
- 1 125. The electrode status indicator of claim 123;
2 wherein the electrode status indicator provides an indication of an extent to
3 which an electrode is fit for use.
- 1 126. The electrode status indicator of claim 123,
2 wherein the panel comprises a region corresponding to electrode condition in
3 accordance with one from the group of an excellent rating, a good rating, an
4 acceptable rating, a poor rating, and an unusable rating.
- 1 127. The electrode status indicator of claim 123,
2 wherein the electrode status indicator provides an indication of an estimated
3 remaining electrode lifetime.
- 1 128. A package for medical electrodes comprising:
2 a release liner;
3 a set of electrodes mounted upon the release liner; and
4 an electrode status indicator comprising:
5 a panel corresponding to a visual metaphor; and
6 an indicating element positioned relative to the panel.
- 1 129. The package for medical electrodes of claim 128,
2 wherein the electrode status indicator provides an indication of an extent to
3 which an electrode is fit for use.
- 1 130. The package for medical electrodes of claim 128,
2 wherein the panel comprises a region corresponding to electrode condition in
3 accordance with one from the group of an excellent rating, a good rating, an
4 acceptable rating, a poor rating, and an unusable rating.

- 1 131. The package for medical electrodes of claim 128,
2 wherein the electrode status indicator provides an indication of an estimated
3 remaining electrode lifetime.
- 1 132. A device coupled to a packaged electrode, the device comprising:
2 circuitry for characterizing an electrical path corresponding to the electrode;
3 and
4 a subsystem for indicating an electrode status via a visual metaphor.
- 1 133. The device of claim 132,
2 wherein the subsystem comprises:
3 a panel corresponding to the visual metaphor; and
4 an indicating element positioned relative to the panel.
- 1 134. The device of claim 132,
2 wherein the visual metaphor corresponds to a fuel gauge.
- 1 135. The device of claim 132,
2 wherein the visual metaphor corresponds to an electrode condition according
3 to one from the group of an excellent rating, a good rating, an acceptable rating, and
4 an unusable rating.
- 1 136. A device coupled to a packaged electrode, the device comprising:
2 circuitry for characterizing an electrical path corresponding to the electrode;
3 and
4 a subsystem for indicating an estimated time period that the electrode is likely
5 to exhibit a given range of operating characteristics.
- 1 137. The device of claim 136,
2 wherein the subsystem indicates an estimated time period via a visual
3 metaphor.
- 1 138. The device of claim 137,
2 wherein the visual metaphor corresponds to a fuel gauge.
- 1 139. The device of claim 136,
2 wherein the subsystem comprises:

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3 a panel; and
4 an indicating element positioned relative to the panel.

1 140. A method for characterizing an electrode mounted upon a release liner, the
2 electrode comprising a conductive layer coupled to a conductive adhesive layer, the
3 conductive adhesive layer characterized by a thickness, the method comprising the
4 step of generating an electrical current along an electrical path internal to the
5 electrode that is characterized by an electrical path length significantly greater than
6 the thickness of the conductive adhesive layer.

1 141. A method for characterizing an electrode mounted upon a release liner, the
2 electrode comprising a conductive layer coupled to a conductive adhesive layer, the
3 method comprising the step of generating an electrical current along an electrical
4 path internal to the electrode that includes a current component that is parallel to the
5 conductive layer.

1 142. A method for characterizing a pair of electrodes mounted upon a release liner,
2 each electrode comprising a conductive layer and a conductive adhesive layer, the
3 method comprising the step of generating an electrical current along an electrical
4 path internal to the electrodes that is longer than a shortest distance between the
5 electrodes' conductive layers.

1 143. In a system comprising a device coupled to an electrode mounted upon a
2 release liner, a method for characterizing an electrical path corresponding to the
3 electrode, the method comprising the step of performing a temperature compensated
4 impedance measurement.

1 144. In a system comprising a device coupled to an electrode mounted upon a
2 release liner, a method for characterizing an electrical path corresponding to the
3 electrode, the method comprising the step of performing a capacitance
4 measurement.

1 145. In a system comprising a device coupled to an electrode mounted upon a
2 release liner, a method for characterizing an electrical path corresponding to the
3 electrode, the method comprising the step of performing a complex impedance
4 measurement.

1 146. In a system comprising a device coupled via lead wires to at least one
2 electrode mounted upon a release liner, at least one electrode comprising a
3 conductive adhesive layer and a conductive layer coupled to the conductive adhesive
4 layer, the conductive layer having at least one nonconductive region therein, a
5 method for characterizing an electrical path corresponding to an electrode and the
6 lead wires comprising the step of determining whether electrical continuity exists
7 along the electrical path.

1 147. The method of claim 146,
2 wherein the determining step comprises the substep of determining whether
3 an open circuit condition exists.

1 148. The method of claim 146,
2 wherein the determining step comprises the substep of determining whether a
3 short circuit condition exists.

1 149. In a system comprising a device coupled via lead wires to at least one
2 electrode mounted upon a release liner, at least one electrode comprising a
3 conductive adhesive layer and a conductive layer coupled to the conductive adhesive
4 layer, the conductive layer having at least one void therein that provides a
5 nonconductive region within the conductive layer, a method for characterizing an
6 electrical path corresponding to an electrode and the lead wires comprising the step
7 of determining whether electrical continuity exists along the electrical path.

1 150. The method of claim 149,
2 wherein the determining step comprises the substep of determining whether
3 an open circuit condition exists.

1 151. The method of claim 149,
2 wherein the determining step comprises the substep of determining whether a
3 short circuit condition exists.

1 152. In a system comprising a device coupled via lead wires to at least one
2 electrode mounted upon a release liner, at least one electrode comprising a
3 conductive adhesive layer, a conductive layer coupled to the conductive adhesive
4 layer, and a set of switches positioned between the conductive adhesive layer and

the conductive layer, a method for characterizing an electrical path corresponding to an electrode and the lead wires comprising the step of determining whether electrical continuity exists along the electrical path.

153. The method of claim 152,
wherein the determining step comprises the substep of determining whether an open circuit condition exists.

154. The method of claim 152,
wherein the determining step comprises the substep of determining whether a short circuit condition exists.

155. In a system comprising a device coupled via lead wires to at least one electrode mounted upon a release liner, at least one electrode comprising a conductive adhesive layer, a conductive layer coupled to the conductive adhesive layer, and an ultrasonic transmitter, a method for characterizing an electrical path corresponding to an electrode and the lead wires comprising the step of determining whether electrical continuity exists along the electrical path.

156. The method of claim 155,
wherein the determining step comprises the substep of determining whether an open circuit condition exists.

157. The method of claim 155,
wherein the determining step comprises the substep of determining whether a short circuit condition exists.

158. In a system comprising a device coupled via lead wires to at least one electrode mounted upon a release liner, at least one electrode comprising a conductive adhesive layer, a conductive layer coupled to the conductive adhesive layer, and an ultrasonic receiver, a method for characterizing an electrical path corresponding to an electrode and the lead wires comprising the step of determining whether electrical continuity exists along the electrical path.

159. The method of claim 158,
wherein the determining step comprises the substep of determining whether an open circuit condition exists.

1 160. The method of claim 158,
2 wherein the determining step comprises the substep of determining whether a
3 short circuit condition exists.

1 161. In a system comprising a device coupled to at least one electrode, a method
2 for determining an impedance of an electrical path that includes an electrode, the
3 method comprising the step of measuring a temperature.

1 162. The method of claim 161, further comprising the steps of:
2 measuring a first impedance value; and
3 determining a second impedance value based upon the first impedance value
4 and the temperature.

1 163. The method of claim 161, further comprising the step of measuring an
2 impedance value,
3 wherein the impedance value remains above a typical patient impedance level
4 throughout a storage temperature range associated with the electrode.

1 164. In a system comprising a medical device coupled to an electrode, a method for
2 determining whether the electrode is mounted upon a release liner comprising the
3 steps of:
4 determining an impedance of an electrical path that includes the electrode;
5 and
6 comparing the impedance to a typical patient impedance level; and
7 determining that the electrode is mounted upon the release liner in the event
8 that the impedance exceeds the typical patient impedance level and the electrical
9 path exhibits electrical continuity.

1 165. The method of claim 164,
2 wherein the typical patient impedance level is greater than or equal to
3 approximately 200 Ohms when measured at a frequency between 10 and 30
4 kilohertz.

1 166. The method of claim 164, further comprising the step of measuring a
2 temperature.

1 167. In a system comprising a medical device, at least one electrode, an ultrasonic
2 transmitter, and an ultrasonic receiver, a method for determining whether an
3 electrode is mounted upon a release liner comprising the steps of:
4 generating an ultrasonic signal at a first time;
5 detecting the ultrasonic signal at a second time; and
6 determining a separation distance in accordance with a difference between the
7 first time and the second time.

1 168. In a system comprising a device capable of performing an electrical
2 measurement coupled to an electrode mounted upon a release liner, the electrode
3 comprising a conductive adhesive layer, a method comprising the steps of:
4 measuring an electrical characteristic of an electrical path that includes the
5 electrode; and
6 determining a current condition of the conductive adhesive layer based upon
7 the electrical characteristic.

1 169. The method of claim 168, further comprising the step of providing an indication
2 of current conductive adhesive layer condition.

1 170. The method of claim 168, further comprising the step of indicating that the
2 electrode requires replacement.

1 171. In a system comprising a device capable of performing an electrical
2 measurement coupled via a set of lead wires to a pair of electrodes mounted upon a
3 release liner, each electrode comprising a conductive layer and a conductive
4 adhesive layer, a method comprising the steps of:
5 measuring an electrical characteristic of an electrical path defined by the lead
6 wires, each electrode's conductive layer, and a portion of each electrode's conductive
7 adhesive layer exclusive of other conductive pathways; and
8 determining a current operating condition of an electrode's conductive
9 adhesive layer based upon the electrical characteristic.

1 172. The method of claim 171,

2 wherein the step of determining the current operating condition of the
3 electrode's conductive adhesive layer precludes a need to associate temporally
4 constant expiration date information with the electrode.

1 173. In a system comprising a device capable of performing an electrical
2 measurement coupled via a set of lead wires to a pair of electrodes mounted upon a
3 release liner, each electrode comprising a conductive layer and a conductive
4 adhesive layer, a method comprising the steps of:

5 measuring an electrical characteristic of an electrical path defined by the lead
6 wires, each electrode's conductive layer, and a portion of each electrode's conductive
7 adhesive layer exclusive of other conductive pathways; and

8 determining an estimated remaining lifetime corresponding to an electrode's
9 conductive adhesive layer based upon the electrical characteristic.

1 174. A method for indicating a status corresponding to an electrode mounted upon
2 a release liner, comprising the steps of:

3 performing an electrical measurement upon a current path that includes the
4 electrode; and

5 indicating an electrode status via a visual metaphor.

1 175. The method of claim 174,

2 wherein the visual metaphor corresponds to a fuel gauge.

1 176. The method of claim 174,

2 wherein the electrode includes a conductive adhesive layer, and wherein the
3 electrode status corresponds to an extent to which the conductive adhesive layer has
4 degraded.

1 177. The method of claim 174,

2 wherein the electrode status corresponds to an estimated time period that the
3 electrode is likely to exhibit a given range of operating characteristics.